Public Health England

Protecting and improving the nation's health

Shooting Up
Infections among people who inject drugs in the UK, 2014

An update, November 2015

Health Protection Scotland

GIG CYMRU NHS WALES
Iechyd Cyhoeddus Cymru
Public Health Wales

HSC Public Health Agency

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Summary

Changing patterns of psychoactive drug injection are increasing risk
The recent increase in the number of people injecting a range of stimulants, particularly the recently emerged psychoactive drugs such as mephedrone, is a concern. Over the past decade, the number of people reporting that amphetamines and amphetamine-type drugs are their main drug of injection has increased three-fold. One in eight now say these are the main drug they inject. People injecting stimulants report higher levels of risk behaviours such as sharing and reusing needles and syringes. Although the number injecting these drugs remains small when compared to those injecting opiates or image and performance enhancing drugs, the higher level of risk behaviours associated with their use can increase harm.

Bacterial infections continue to be a problem
A third of people who inject psychoactive drugs report having a recent symptom of a bacterial infection. Outbreaks of infections due to bacteria, such as *Clostridium botulinum,* continue to occur in this group. Some of these infections are severe and place substantial demands on healthcare.

Half of those with hepatitis C remain unaware of their status
Hepatitis C remains a major problem among people who inject drugs in the UK, with significant levels of transmission continuing to occur. Two in five of those who inject psychoactive drugs are living with hepatitis C and about half of these infections remain undiagnosed. This underlines the need to identify, and make use of, the opportunities for regularly offering tests to those at risk.

Hepatitis B remains rare, but vaccine uptake has stopped improving
Around one in 200 people who have injected psychoactive drugs are living with hepatitis B infection. This low level probably reflects the marked increase in the uptake of the hepatitis B vaccine. Vaccination uptake in this group is no longer increasing and may now be declining. Most of those who have not been vaccinated have been in contact with health services where they could have received a dose of the vaccine.

HIV levels remain low overall and the uptake of care is good
Only around one in 100 people who inject drugs are living with HIV; most of these people will have been diagnosed and be in receipt of care. However, HIV transmission continues among people who inject drugs and the recent outbreak in Scotland is a concern.

Provision of effective interventions needs to be maintained
The provision of effective interventions, such as needle and syringe programmes, opioid substitution therapy and other treatments for drug use, which act to reduce risk and prevent infections, need to be maintained. These interventions need to respond to any changes in patterns of drug use and associated risk. Vaccinations and diagnostic tests for infections need to be routinely and regularly offered to people who inject drugs in line with guidance. Appropriate care pathways and treatments should be available to those testing positive.

Introduction

People who inject drugs are vulnerable to a wide range of viral and bacterial infections. These infections can result in high levels of illness and death. Public health surveillance of infectious diseases and the associated risk and protective behaviours among this group provides important information. This information is essential to understanding the extent of these infections, the risk factors for their acquisition, and for monitoring the effectiveness of prevention measures.

This annual national report describes trends in the extent of infections and associated risks and behaviours among people who inject drugs in the UK to the end of 2014.[a] Further information can be found in the set of data tables that accompany this report.[b]

Changing patterns of psychoactive drug injection are increasing risk

The types of psychoactive drugs being injected in the UK are continuing to change, though heroin remains the most commonly injected psychoactive drug. In part, this reflects a decline in the injection of opiates and crack-cocaine in England.[1] However, the injection of other psychoactive drugs, particularly stimulants such as amphetamines and amphetamine-type[c] drugs, has become more common in recent years. The use of stimulants has been associated with higher levels of risk behaviours and lower levels of intervention uptake.[2] There are concerns about the injection of some of the recently emerged psychoactive drugs[d], in particular the amphetamine-type stimulant, mephedrone. The use of mephedrone was first noted in the UK in 2008[3] and it was controlled under the Misuse of Drugs Act in 2010. Mephedrone injecting is a more recent practice which occurs mainly among people who have previously injected other drugs, and among people who have switched from snorting mephedrone.[4]

[a] Where data have been previously published, only the proportions are usually given in this report. The numerators and denominators for these proportions can be found in the source publications.

[b] The data tables can be found on this webpage: https://www.gov.uk/government/statistics/people-who-inject-drugs-hiv-and-viral-hepatitis-monitoring.

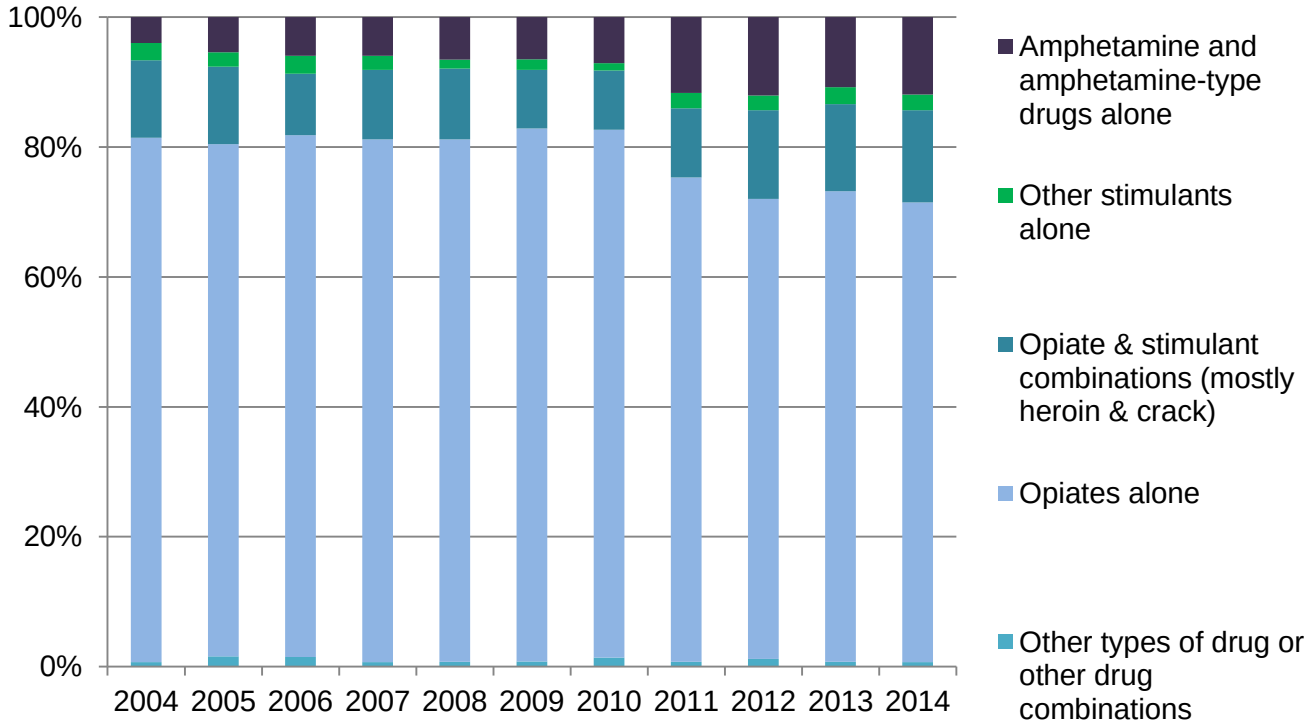
[c] Amphetamine-type drugs include a number of substances with similar properties to amphetamines such as ecstasy and the synthetic cathinones including mephedrone.

[d] Recently emerged psychoactive drugs are those drugs which have become available recently and are not controlled by international treaties, such as, mephedrone and ethylphenidate. This term includes a wide range of substances, some of which can be injected. Those injected are typically stimulants.

Changing nature of injecting

The proportion of people surveyed in England, Wales and Northern Ireland who report injecting amphetamines and amphetamine-type drugs as their main drug rose from 3.9% (58/1,460) in 2004 to 12% (159/1,354) in 2014; overall, opiates remain the most commonly injected main drug (Figure 1). In England, Wales and Northern Ireland, 24% of those surveyed in 2014 reported that they had injected amphetamine ('speed') during the preceding month, an increase from 18% in 2010.[5] Mephedrone injection during the preceding month was reported by 5.9% (92/1,554) in 2014, with 8.9% (184/2,054) having injected this drug at some point during the preceding year. Those who had injected mephedrone were younger than those who had not.[e]

Figure 1: Main drug type injected among those currently* injecting psychoactive drugs in England, Wales & Northern Ireland: 2004 to 2014



* Among those who had injected psychoactive drugs during the preceding 28 days.
Data source: Unlinked Anonymous Monitoring Survey of people who inject drugs.

In Scotland, among people who had injected drugs during the past six months, heroin was the most commonly injected drug, reported by nine-tenths of those surveyed at

[e] The mean age of those who reported that they had injected mephedrone was 33 years compared to 37 years for those who had not.

services providing injecting equipment between 2008 and 2014.[f] The proportion reporting powder cocaine as their main drug of injection remains low, but has increased in recent years, up from 2.5% in 2010 to 3.9% in 2013-14. Reports of the use of the recently emerged psychoactive drugs are rare but increasing, with 2.5% (49/1,933) of respondents reporting recent injection of these drugs in 2013-14, up from 0.1% in 2011-12.[6] Prevalence of recent injection of these drugs in 2013-14 was highest in the Lothian Health Board area (9.0%, 22/245).

Data from both England and Wales indicate that there have been changes in the types of drugs being injected among those presenting to services that provide treatment for drug use, and in particular an increase in presentations reporting the injection of amphetamines or amphetamine-type drugs and of the recently emerged psychoactive drugs.[2,7] The vast majority of those presenting to treatment services are injecting heroin. Data from Wales also indicate a similar pattern among those accessing needle and syringe programmes, with the proportion of individuals reporting injection of amphetamine and amphetamine-type drugs as their main drug increasing from 7% in 2011-12 to 10% in 2013-14.[8]

Higher levels of injecting risk

Overall, the level of needle and syringe sharing (either borrowing or lending a used needle or syringe) among those currently injecting psychoactive drugs has fallen across the UK. In Scotland, sharing in the previous month fell from 22% during 2006-07 to 14% in 2013-14 among individuals attending drug treatment services (Accompanying Data, Table 3), while in England, Wales and Northern Ireland sharing fell from 28% in 2004 to 17% in 2014 (Accompanying Data, Table 3). Those currently injecting mephedrone were, however, more likely to report sharing (Figure 2).[g]

The sharing of filters and mixing containers is more common, and was nearly twice as frequent among those injecting mephedrone (Figure 2).[h] The sharing of mixing containers, filters, needles and/or syringes, was reported by nearly two in five (38%) of those surveyed across England, Wales and Northern Ireland in 2014 (Accompanying Data, Table 3). Those who had injected amphetamine during the preceding month were also more likely to report that they had shared injecting equipment, with 43% reporting this.[i]

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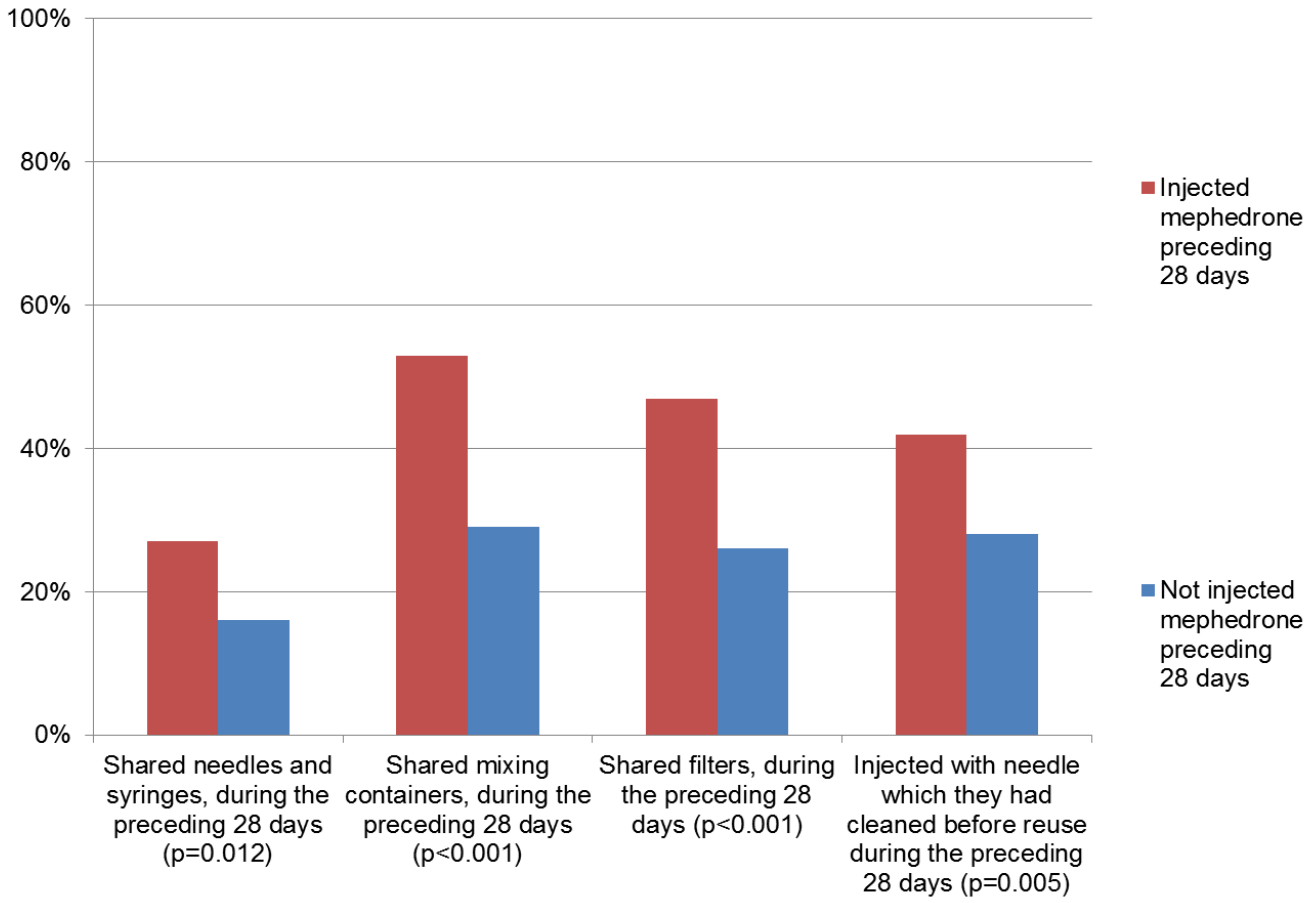
[f] Surveys were undertaken in 2008-09, 2010, 2011-12 and 2013-14, with heroin use reported by between 89% to 93%.
[g] Sharing of needles and syringes was reported by 27% (24/90) of those who reported injecting mephedrone during the preceding 28 days compared to 16% (232/1,413) of those who had not.
[h] Sharing of mixing containers was reported by 53% (48/91) of those who had injected mephedrone during the preceding 28 days compared to 29% (422/1,452) of those who had not; and the sharing of filters was reported by 47% (43/91) of those who had injected mephedrone during the preceding 28 days compared to 26% (232/1,413) of those who had not.
[i] Sharing of needles, syringes, mixing container and/or filters was reported by 43% (160/369) of those who reported injecting amphetamine during the preceding 28 days compared to 37% (430/1,170) of those who had not.

Cleaning and reusing injecting equipment also remains common among those injecting psychoactive drugs, and again this was more frequent among those injecting mephedrone (Figure 2).[j] Overall in 2014, 29% of those currently injecting psychoactive drugs in England, Wales and Northern Ireland reported injecting with a needle that had previously been used and which they had then attempted to clean.[18]

Figure 2: Injecting risk behaviours* among those injecting mephedrone in England, Wales & Northern Ireland: 2014



*Among those who had injected psychoactive drugs during the preceding 28 days.
Data source: Unlinked Anonymous Monitoring Survey of people who inject drugs.

[j] Injecting with a needle that had been cleaned before reuse during the preceding 28 days was reported by 42% (38/91) of those who had injected mephedrone during the preceding 28 days compared to 28% (404/1,451) of those who had not.

Increased harms

In England, Wales and Northern Ireland, those who reported that they had injected mephedrone during the preceding year were more likely to have HIV, to have antibodies to hepatitis C virus, and to report having had an injection site infection during the preceding year.[k] These findings suggest that mephedrone injecting may have emerged among higher risk groups with already elevated levels of infection. Those who reported that they had injected amphetamine during the past year were also more likely to have antibodies to hepatitis C than those who had not.[l]

Increased injection of stimulants has been reported to be a factor in a number of outbreaks of injection related infections. In south west Wales, an increase in infections and other harms has been associated with the emergence of the injection of synthetic cathinones, including mephedrone. The changes in injection practice associated with the use of these stimulants probably markedly increased risks (box 1). In the Lothian area of Scotland, there has recently been a large outbreak of soft-tissue infections among people who inject drugs. Although the people involved had injected a range of drugs, they commonly reported that a recently emerged psychoactive drug, believed to be ethylphenidate, was among the drugs they had used.[9] The use of this relatively short acting stimulant is known to increase injection frequency and so increase risks.

There have been increases in HIV transmission among people who inject drugs in a number of European countries in recent years that have been associated with the emergence of the injection of stimulants, usually in populations already injecting opiates.[10,11,12] The most recent of these outbreaks in Dublin[13] has been linked to the injection of a synthetic cathinone.

Overall, these findings indicate an increase in the number of people injecting stimulants, particularly amphetamines and amphetamine-type drugs, in the UK. It is worrying that within five years of it first appearing, around one-in-ten people who inject drugs reported the injection of mephedrone. There are also ongoing concerns about the injection of mephedrone and other drugs among some sub-groups of MSM during sex, with injecting equipment often shared and condoms not being used.[14,15]

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[k] Of those who had injected mephedrone during the preceding year: 2.7% (5/184) had HIV compared with 0.7% (13/1,870) of those who had not, after adjusting for age, gender/male sexuality, and region of recruitment this difference remains (adjusted odds ratio of 4.0, 95%CI 1.3-12); 55% (101/184) had antibodies to hepatitis C compared with 52% (966/1,870) of those who had not, after adjusting for age, gender/male sexuality, and region of recruitment this difference remains (adjusted odds ratio of 1.5, 95%CI 1.1-2.0); and 42% (68/163) reported a symptom of an injecting site infection compared with 30% (489/1,634) of those who had not, after adjusting for age, gender/male sexuality, and region of recruitment this difference remains (adjusted odds ratio of 1.7, 95%CI 1.2-2.4).

[l] Of those who had injected amphetamine during the preceding year, 55% (334/609) had antibodies to hepatitis C compared with 51% (733/1,445) of those who had not, after adjusting for age, gender/male sexuality, and region of recruitment this difference remains (adjusted odds ratio of 1.4, 95%CI 1.1-1.7). There were no differences in the prevalence of HIV or the extent of symptoms of injecting site infections.

Box 1: Increases in risk behaviours and blood borne virus infection among people who inject psychoactive drugs in South Wales

Over the past 18 months, Public Health Wales has identified a sharp rise in new hepatitis C diagnoses among people who inject drugs, as well as a small cluster of individuals newly diagnosed with HIV and hepatitis C co-infection in south west Wales.

This problem is linked to an historic opioid injecting population starting to inject stimulants, specifically some of the psychoactive drugs that have recently emerged. An increase in the number of people who mainly inject stimulants has also been seen. Injection of the recently emerged stimulant drugs, specifically cathinones such as mephedrone, is associated with increased risk behaviours (such as increased injecting frequency and sharing of injecting equipment), due to the effects of the drugs leading to compulsive use. This increases the risks of transmission of blood borne viruses, as well as injection site infections, abscesses and deep vein thrombosis.

Where recorded, the number of individuals accessing specialist needle and syringe programmes who self-report injection of a recently emerged psychoactive drug rose by 168% (from 154 in 2011-12 to 412 in 2014-15). Over the same period, survey data indicate that the prevalence of hepatitis C infection has increased from 39% to 50%.

In response, Public Health Wales is currently revising the surveillance systems for blood borne virus infection among people who inject drugs; developing proactive community outreach for those not in contact with any services including needle and syringe programmes; increasing the accessibility and provision of sterile injecting equipment; increasing the opportunity for blood borne virus testing in specialist services and in a range of community environments; and, raising awareness, particularly in relation to co-infection with HIV.

Bacterial infections continue to be a problem

Almost a third (31%) of those injecting psychoactive drugs in England, Wales and Northern Ireland in 2014 reported that they had experienced an abscess, sore or open wound (all possible symptoms of an injecting site infection) during the past year (Accompanying Data, Table 2). This compares to 35% in 2006. These symptoms are more commonly reported by women (37%) than men (29%).[5] Among those attending needle and syringe programmes in Scotland during 2013-14, 28% reported that they had experienced an abscess, sore or open wound, during the past year. These

infections are also an issue among people injecting image and performance enhancing drugs, such as anabolic steroids, peptides and melanotan, with 16% of this group reporting that they have ever had an abscess, sore or open wound in 2012-13.[19]

Illnesses, such as botulism, which are caused by the toxins produced by a number of spore-forming bacteria, continue to cause problems among people who inject drugs. The spores produced by these bacteria are found in the environment, and may end up in drugs, such as heroin, through contamination. Between 2000 and 2013, there had been a total 167 cases of botulism among people who inject drugs in the UK. During 2014 there were a further three cases; the last two of these were the first cases in the largest cluster of botulism among people who inject drugs seen in Europe. This cluster, centered on Glasgow, involved a total of 40 cases over a six-month period (box 2). There were no cases of tetanus or anthrax among people who inject drugs in the UK during 2014 (Accompanying Data, Table 2).

Severe illnesses among people who inject drugs due to hygiene related bacterial infections, including those caused by *Staphylococcus aureus* and Group A streptococci, continue to occur (Accompanying Data, Table 2). Data from the mandatory enhanced surveillance of meticillin-sensitive *S. aureus* (MSSA) and meticillin-resistant *S. aureus* (MRSA) bacteraemias indicate that in 2014, of those with risk factor information, 9.2% (255/2,772) of the MSSA bacteraemias were associated with injecting drug use, as were 4.7% (10/215) of the MRSA bacteraemias (Accompanying Data, Table 2). There has recently been a large outbreak of soft tissue infections among people who inject psychoactive drugs in Edinburgh, with many of the cases requiring prolonged hospital admissions and extensive surgical interventions. Though a number of different organisms were detected, Group A streptococci infections, and in particular one less commonly seen type of *S. pyogenes*, were often detected in the cases.[9]

These data indicate that bacterial infections remain common among people who inject drugs, and that outbreaks of infections due to bacteria continue to occur in this group.[9] These infections have a substantive impact on health services,[16] with studies indicating that around one in 10 people who inject drugs are admitted to hospital each year due to a bacterial infection.[17] This impact is probably compounded by delays in seeking healthcare in response to the initial symptoms of these infections.[17] Many of these infections could be prevented by reducing risky injecting practices, such as the reuse of injecting equipment, and the more serious consequences reduced by prompt treatment.

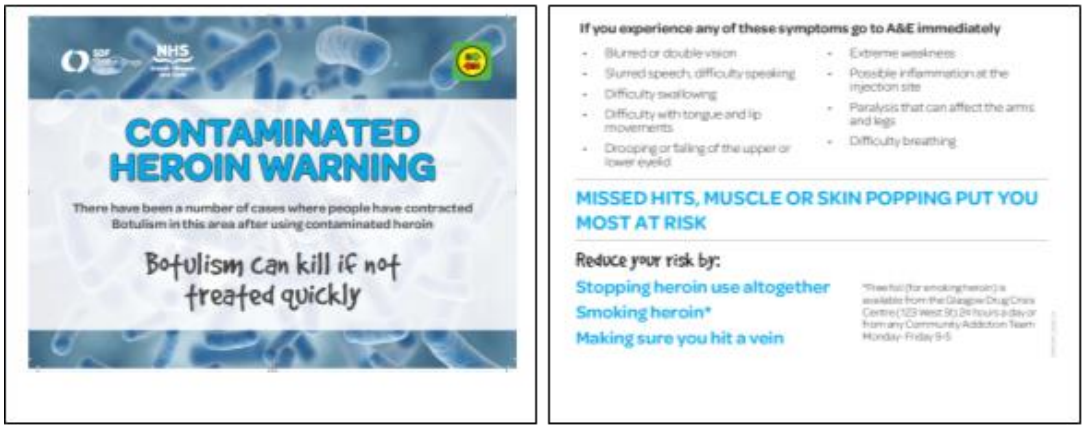
Box 2: Wound botulism cluster in Glasgow: 2014-15

Wound botulism is a rare but potentially fatal illness. It is caused by the powerful neurotoxin produced by the bacterium *Clostridium botulinum* when it grows in damaged tissues. The toxin causes paralysis and respiratory problems that can lead to death.

Between December 2014 and May 2015, 40 people who inject drugs were clinically diagnosed with botulism. All cases were resident in Scotland, and had injected heroin sourced from Glasgow. The majority of cases (98%) presented with bulbar palsy (a form of paralysis that affects the muscles in the head); over half (58%) were ventilated for respiratory paralysis, although most did not require long-term support. All cases were promptly treated with antitoxin, half had wounds cleaned out (debridement) and all received antibiotics. There were four deaths; botulism was a contributory cause in two of these cases. Seventeen (42%) cases were confirmed by detection of the toxin in blood or detection of *Clostridium botulinum* type B in wound material. Molecular typing was undertaken on the organisms isolated from 14 of the cases, and found all these to be of the same type, suggesting a common source.

Awareness-raising materials, highlighting the symptoms of botulism, were distributed widely among people who use drugs, healthcare professionals, and frontline workers in addiction and injecting equipment provision services. A harm minimisation approach was taken, advising users to make sure they injected their drugs into a vein, smoked drugs as an alternative to injecting, or if possible stopped use altogether.

Botulism health warning 'postcard' distributed to people who use drugs



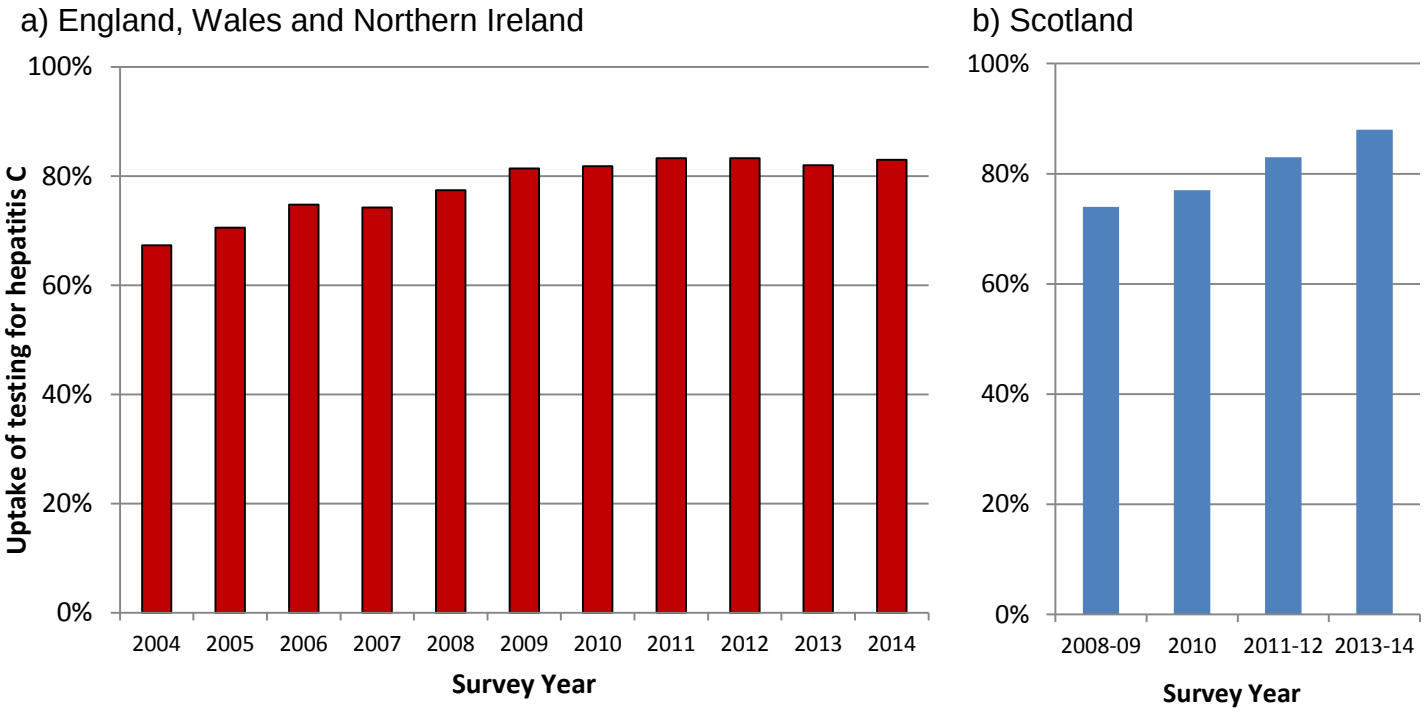
Source: Scottish Drugs Forum (www.sdf.org.uk) / NHS Greater Glasgow and Clyde

Half of those with hepatitis C remain unaware of their status

People who inject drugs are the group most affected by hepatitis C in the UK. Around 90% of the hepatitis C infections diagnosed in the UK will have been acquired through injecting drug use. Across the UK, 14,149 positive test results for hepatitis C were reported during 2014 (Accompanying Data, Table 1a), though around half of infections among people who inject drugs still remain undiagnosed.[18]

The uptake of voluntary confidential testing for hepatitis C among people injecting psychoactive drugs in England, Wales and Northern Ireland increased between 2004 (67%) and 2010 (82%) (Figure 3a; Accompanying Data, Table 3). However, since then the level of uptake has been stable, and in 2014, it was 83% in England, 85% in Wales, and 88% in Northern Ireland.[5,18]

Figure 3. Uptake of the voluntary confidential testing for hepatitis C among people who inject drugs: a) England, Wales and Northern Ireland, and b) Scotland



Data source: Unlinked Anonymous Monitoring survey of people who inject drugs (England, Wales and Northern Ireland) and Needle Exchange Surveillance Initiative (Scotland).

Data from the National Drug Treatment Monitoring System (NDTMS) indicates that levels of hepatitis C testing among people who have ever injected drugs and who are in treatment for their drug use have risen in England (Accompanying Data, Table 3). In

2013/14, of those who have ever injected drugs, almost nine-tenths (87%) were offered a hepatitis C test at the beginning of their most recent treatment period, and of those offered, two-thirds (67%) accepted that offer. This indicates that two-fifths (40%) were not tested because testing was either not offered or declined.[18] About the same proportion of those newly presenting to treatment were offered testing (81%), and of those offered 58% accepted, indicating more than half (52%) were not tested.[18]

In 2014, among those injecting psychoactive drugs in England, Wales and Northern Ireland, only half (52%) of those with hepatitis C reported that they were aware of their hepatitis C status.[5] This proportion has remained relatively stable over the past decade.[5] Of those who were unaware of their positive status, 23% reported never having had a test for hepatitis C; and of those unaware but tested, 43% reported that their last test had been more than two years ago.[m] This indicates a need for interventions to support regular testing uptake among people who inject drugs (box 3). Among those who were unaware of their hepatitis C status, 64% (399/619) had used a needle and syringe programme and 70% (430/615) were currently receiving a prescribed substitute drug. Many also reported using other health services during the preceding year where they could have been tested for hepatitis C: 65% (401/619) had seen a general practitioner; 24% (151/619) had attended an emergency department; 17% (106/619) had used a walk-in/minor injury clinic; and 8.9% (55/619) had attended a genitourinary medicine clinic. These data show that those with undiagnosed hepatitis C infection make extensive use of specialist services for people who inject drugs and primary care, and indicate that there are missed opportunities for hepatitis C testing in these settings.

Among those attending needle and syringe programmes in Scotland during 2013-14, 88% reported having ever been tested for hepatitis C (Accompanying Data, Table 3); this is higher than the 74% reported by those surveyed in 2008-09 (Figure 3b).

UK-wide data indicate that around half of those who inject psychoactive drugs have been infected with hepatitis C: with 58% of those surveyed in Scotland during 2013-14 having antibodies to hepatitis C, 50% in England, 50% in Wales, and 23% in Northern Ireland[18] (Accompanying Data, Table 1a). As around one quarter of those infected with hepatitis C naturally clear their infection, these data suggest that about two in five of those who inject psychoactive drugs are currently living with hepatitis C infection in the UK.

The level of hepatitis C transmission among people who inject psychoactive drugs in the UK appears to have shown little change in recent years. In England, Wales and

[m] Of those participants in the UAM Survey of PWID who had antibodies detected in the biological sample and who did not report being aware of their hepatitis C status, 140 out of 619 reported never having had a voluntary confidential diagnostic test for hepatitis C. Of those who had been tested, 156 out of 364 reported that their last test was prior to 2013.

Northern Ireland, 19% of recent initiates to injecting had been infected in 2014 – this is similar to the level found a decade ago (Accompanying Data, Table 1a).[n] Incidence is currently estimated at five to 16 infections per 100 person years of exposure.[18] In Scotland, hepatitis C incidence among those who inject psychoactive drugs was estimated to be 10 infections per 100 person years of exposure during 2013-14.[18]

Box 3: Hepatitis C improving testing uptake: a case study

Barnet Drug and Alcohol Service undertook a renewed approach to blood borne virus testing in the borough. A blood borne virus nurse helped to improve the interventions offered to service users. Information about the referral pathways for those wanting a test or with a blood borne virus diagnosis were written up, presented and distributed to all staff in local drug and alcohol services. The issue of blood borne viruses was regularly talked about in team meetings to raise awareness among staff. Staff were also encouraged to do the RCGP/PHE course on Hepatitis C: Enhancing Preventing, Testing and Care*.

All clients with outstanding blood borne virus interventions were written to and invited for hepatitis B, hepatitis C and/or HIV testing, vaccination and appropriate referral for treatment for those with positive results. Follow-up letters were sent to those who did not initially respond and the nurse also spent time in waiting rooms and in services to engage with people, in person. The blood borne virus clinic times were flexible and offered on a drop-in basis to help with engagement. All staff have now been trained to carry out dried blood spot (DBS) testing so that clients can be routinely and regularly offered testing during their key working sessions.

The re-offer of testing to all clients resulted in 266 service users being tested between February and August 2015. Of these, 50 tested positive for one or more of hepatitis C, hepatitis B or HIV; around four-fifths of those with at least one positive result had hepatitis C. Clients have since been referred to appropriate hepatology services and are being supported within drug services by a new Wellbeing Clinic set up by the blood borne virus nurse to support physical and other health issues.

* www.elearning.rcgp.org.uk/hepc

In England and Wales, among those who only inject image and performance enhancing drugs, 3.6% had antibodies to hepatitis C in 2012-13.[19] This is lower than the prevalence among those who inject psychoactive drugs, but higher than the level in the general population (which is around 0.4% in England[18]). Only 32% of those injecting image and performance enhancing drugs reported ever being tested for hepatitis C.[19]

[n] A recent initiate is someone who had first injected drugs during the preceding three years.

In Scotland, among those who had only injected image and performance drugs during the last six months, 5.1% had antibodies to hepatitis C in 2013-14. Just under a third (29%) of those injecting image and performance enhancing drugs only in 2013-14 reported ever being tested for hepatitis C, up from 18% in 2010.

These data show that hepatitis C remains a major problem among people who inject drugs in the UK, with high levels of transmission. Although the uptake of testing is high, about half of the hepatitis C infections among people who inject drugs remain undiagnosed either because they have not been tested, or have become infected since their last test. Interventions to reduce the transmission of hepatitis C, diagnostic testing services and care pathways for those infected need to be continued and where appropriate expanded.[18]

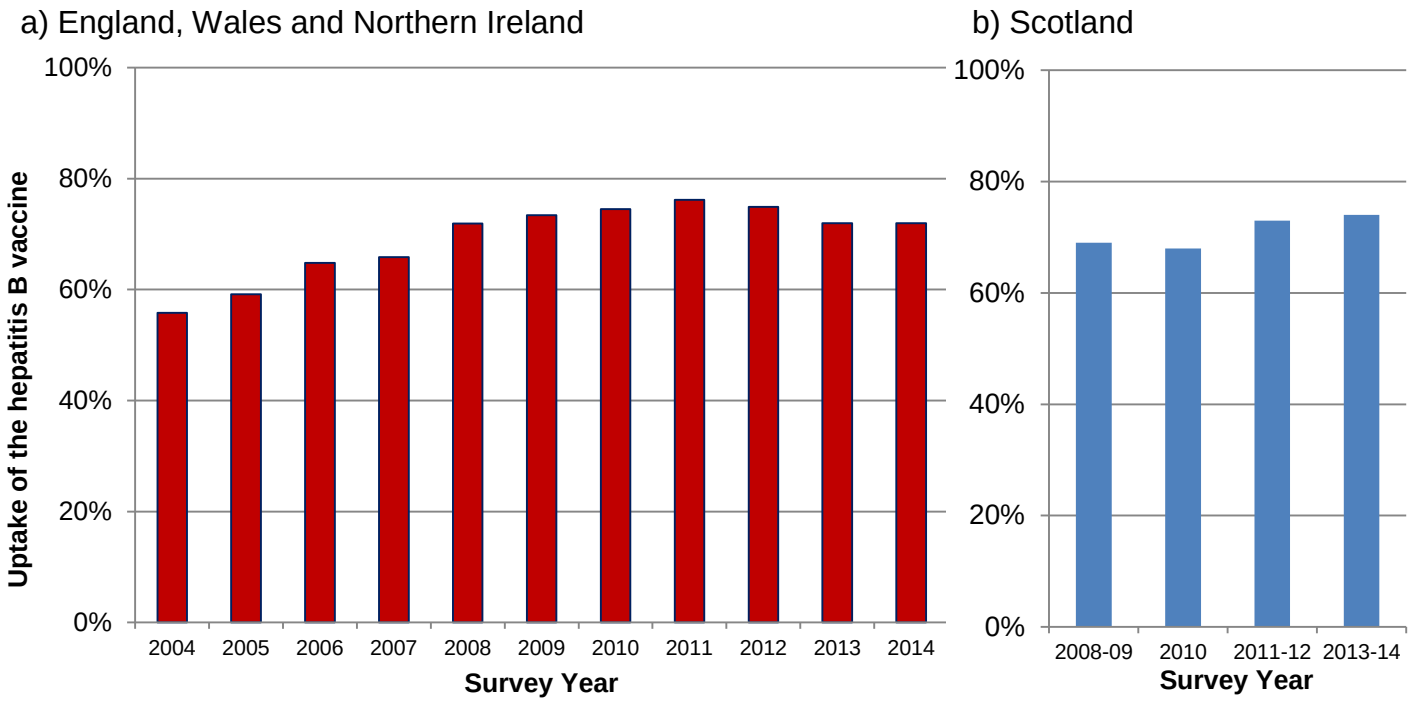
Hepatitis B remains rare, but vaccine uptake has stopped improving

The transmission of hepatitis B continues among people who inject drugs, but it has probably declined in recent years. The proportion of people who inject psychoactive drugs ever infected with hepatitis B in England, Wales and Northern Ireland has halved over the past 10 years, falling from 28% in 2004 to 14% in 2014 (Accompanying Data, Table 1b). In 2014, only 0.58% had a current hepatitis B infection, which is similar to the level seen in recent years. This suggests that only around one in 200 of people who have injected psychoactive drugs are currently living with hepatitis B infection.[20]

In England, Wales and Northern Ireland, reported uptake of the hepatitis B vaccine (ie receiving at least one dose) increased from around half in 2004 to almost three-quarters in 2014. However, the level of uptake has declined slightly in recent years (Figure 4a), from 76% in 2011 and 72% in 2014[5,20] (Accompanying Data, Table 3). In 2013, reported uptake in England was 72%, in Wales 76%, and in Northern Ireland 78%. Among those surveyed in 2014 that had *never* been infected with hepatitis B and who had taken-up vaccination, 61% (1,060/1,742) reported that they had received three or more doses of the vaccine and were therefore likely to be fully protected. Of those that had not taken-up vaccination, 54% (214/397) had recently used a needle and syringe programme and 55% (219/396) were currently receiving a prescribed substitute drug. A range of other health services, where vaccination could have been offered, had been used by this group during the preceding year: 62% (247/397) had seen a general practitioner; 26% (103/397) had attended an emergency department; 14% (56/397) had used a walk-in/minor injury clinic; and 7.8% (31/397) had attended a genitourinary medicine clinic.

Among those attending needle and syringe programmes in Scotland during 2013-14, 74% reported uptake of the hepatitis B vaccine (Accompanying Data, Table 3, Figure 4b).

Figure 4. Uptake of the vaccine against hepatitis B among people who inject drugs: a) England, Wales and Northern Ireland, and b) Scotland



Data source: Unlinked Anonymous Monitoring survey of people who inject drugs (England, Wales and Northern Ireland) and Needle Exchange Surveillance Initiative (Scotland).

Data from the NDTMS in England indicate that the vast majority of those who have ever injected drugs at risk of hepatitis B are offered vaccination against hepatitis B when they presented for treatment for their drug use. However, the proportion accepting that offer has declined from 61% in 2009/10 to 54% in 2013/14 (Accompanying Data, Table 3). In 2013/14, more than four-fifths (92%) of this group were offered hepatitis B vaccination at the beginning of their most recent treatment period. Of those offered vaccination, 38% declined, which is an increase on the 26% who declined an offer in 2009/10.

Among people injecting image and performance enhancing drugs in England and Wales, 2.8% of them had ever been infected with hepatitis B in 2012-13.[3] This is lower than among those injecting psychoactive drugs, but probably higher than the level found in the general population.[21] Only 40% of those injecting image and performance enhancing drugs reported uptake of the vaccine against hepatitis B.[3]

Hepatitis B vaccination uptake in those injecting psychoactive drugs is no longer increasing and may now be declining. Even though findings indicate that hepatitis B infection among this group is now rare, it is essential that high vaccination levels are

maintained. Most of those who have not taken up vaccination have been in contact with a number of health services where vaccination could have been provided. This shows that there are missed opportunities for vaccination, particularly in specialised drug services and primary care, and indicates that local areas need to review vaccination provision. There are much lower levels of vaccine uptake among people who inject image and performance enhancing drugs; this is a concern and appropriate interventions are needed for this group.

HIV levels remain low overall and the uptake of care is good

There were 131 new HIV diagnoses associated with injecting drug use in 2014 (Accompanying Data, Table 1c). HIV prevalence among those who have ever injected psychoactive drugs appears to be stable (Accompanying Data, Table 1c). In England, Wales and Northern Ireland, 1.0% of the people who inject psychoactive drugs surveyed in 2014 were infected. Among those attending needle and syringe programmes in Scotland during 2013-14, 0.8% were HIV antibody positive. The HIV prevalence among people who inject drugs in the UK is low compared to many other European countries.[22] Data indicate that overall HIV incidence among people who inject drugs is currently low; very few infections are found among recent initiates to injection (Accompanying Data, Table 1c).

Though HIV prevalence is low among people who inject drugs in the UK, outbreaks do occur. An outbreak of HIV among people who inject drugs in Glasgow is currently being investigated. Glasgow typically records about 10 new diagnoses of HIV associated with injecting drug use each year; at the end of August, 36 new diagnoses with this risk had already been reported for 2015, nearly all with subtype-C virus. Data indicate that this increase in diagnoses is related to transmission among a small, but appreciable population of highly chaotic, vulnerable and often homeless people who inject psychoactive drugs, mainly heroin. This outbreak is being managed through increasing awareness of the risks of HIV, making HIV testing more accessible and proactively supporting the early treatment of those newly diagnosed to reduce the risk of onward transmission.

Most of those who inject psychoactive drugs reported ever being tested for HIV (77% in 2014 in England, Wales and Northern Ireland, and 78% in Scotland) and the majority of those with HIV were aware of their infection.[23]

The prevalence of HIV infection among those who inject image and performance enhancing drugs was 2.0% in 2012-13. This is similar to the prevalence among people who inject psychoactive drugs (after excluding men who report sex with other men –

who are at particular risk of HIV through sexual transmission – prevalence was 0.9%).[19] Only 41% of those injecting image and performance enhancing drugs reported ever being tested for HIV in 2012-13.[19]

Owing to improved survival, the number of HIV-infected people seen for HIV treatment and care in the UK who had acquired their infection through injecting has increased over the past decade, with 1,654 seen in 2014 (Accompanying Data, Table 1c). In 2014, 418 people who acquired their HIV infection through injecting and who were seen for care had CD4 counts of 350 cells/mm3 (the recommended level to start anti-retroviral therapy in 2014) or less. Among those seen for HIV treatment and care with CD4 counts of 350 or less in 2014, 87% of those who had acquired their infection through injecting were on anti-retroviral therapy (Accompanying Data, Table 1c). Following a recent revision to the guidelines, anti-retroviral treatment is now recommended for all those with HIV.[24] In 2014, 90% of those seen for care who had acquired their HIV infection through injecting were on anti-retroviral therapy.

Although HIV infections continue to occur among people who inject drugs, these findings indicate that the overall HIV prevalence in this group remains comparatively low. Most of those with HIV are aware of their infection and uptake of treatment and care for HIV among those diagnosed is high. However, the recent HIV outbreak in Scotland is a concern.

Provision of effective interventions needs to be maintained

Injecting risk behaviours and infections remain common among people who inject drugs. The provision of interventions that aim to prevent infections among this group, such as needle and syringe programmes and opioid substitution treatment, need to be sustained. As the impact of these interventions is dependent on their coverage,[25] it is important that the level of their provision is regularly reviewed to ensure that it is adequate to prevent infections. Ensuring good intervention coverage among those who have very recently started to inject is particularly important, as the extent of hepatitis C infection in this group indicates that many people are becoming infected soon after they start injecting.

Those who commission services to reduce the harm associated with injecting drug use should give appropriate priority to preventing the spread of infections. National drug strategies acknowledge that tackling drug-related harm and reducing infections are important components of a recovery-focused response to drug use.[26,27,28,29] Services commissioned in line with these strategies, relevant action plans,[30,31,32,33] related

guidance,[34,35,36,37,38,39] and local needs assessments[40] should include locally appropriate provision of:

- needle and syringe programmes,
- opioid substitution treatment
- other drug treatments

These, and other services such as primary care and sexual health services, should provide information and advice on safer injecting practices, preventing infections and the safe disposal of used equipment, as well as access to an appropriate range of other interventions to reduce injection-related harm.

The ***changing patterns of psychoactive drug injection are increasing risk*** as a result of the injection of stimulants — particularly amphetamines and amphetamine-type drugs — becoming more common. Services that are provided to reduce the risk of infections should reflect the increasing range of drugs that are now being injected. These services should also be appropriate to the needs of particular groups of people who may inject drugs, such as some men who have sex with men.

As ***bacterial infections continue to be a problem,*** information and advice on safer injecting practices and avoiding injection site infections are important, as are the provision of health checks, treatment for injection site infections and tetanus vaccination when appropriate.[43]

Diagnostic testing for hepatitis C is particularly important because among people who inject drugs ***half of those with hepatitis C remain unaware of their status***. Well-designed and supportive care pathways for those infected are also needed. Approaches to improve the offer and uptake of hepatitis C testing should be explored. Those who continue to inject and are diagnosed with HCV, should have access to effective treatment and care, in line with current guidelines.[36,41,42]

Hepatitis B remains rare, but vaccine uptake has stopped improving, therefore provision of vaccination should be maintained in line with guidance[43] and ways of further improving uptake among people who inject drugs should be explored. The use of innovative approaches to reduce the number of missed opportunities for vaccination, such as contingency management including the use of incentives,[44] should be considered.

HIV transmission continues among people who inject drugs in the UK and outbreaks still occur. It is therefore important that access to diagnostic testing for HIV and care pathways for those infected are maintained to ensure ***HIV levels remain low overall and the uptake of care is good***.

Injecting risk behaviours, though less common than a decade ago, are continuing to put people at risk of infection. A range of easily accessible needle and syringe programmes for all people who inject drugs, including those injecting image and performance enhancing drugs or using drug treatment services, need to be provided in line with guidance.[35,39] These programmes should aim to distribute appropriate and sufficient injecting-related equipment to prevent sharing and to support hygienic injecting practices. They should also offer interventions that support entry into treatment and other interventions to decrease or stop injecting (including providing foil[45,46]).

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